REMARKS

Claims 7-10 are pending in this application.[1] Claims 7-10 are also currently amended. Claims 1-6 and 11-14 are cancelled, without prejudice.

Applicants submit that claim 7 remains generic, and that all of claims 8-10 depending from claim 7 properly remain in this application on that basis. Applicants submit further that claim 7, as amended herein and for the reasons set forth below, is allowable, and that claims 8-10 all depending from claim 7 are allowable on that basis.

Applicants' invention, as now more clearly claimed, is a tubular filter product comprising an integral tubular body of melt blown fibers formed by deposit of a plurality of the melt blown fibers upon a rotating support. The integral tubular body defines an outer surface and an inner surface, and further defines a pattern of cavities. The claimed limitation "formed by deposit of a plurality of the melt blown fibers upon a rotating support" is a structural limitation, defining to those skilled in the art structural characteristics of the integral tubular body.

Claims 7, 9 and 10 stand rejected under 35 USC §102(e) as being anticipated by Pulek et al. U.S.6,391,200. We respectfully traverse.

Applicants' invention is a tubular filter with an integral tubular body of melt blown fibers, formed by deposit of a plurality of the melt blown fibers upon a rotating support. In marked contrast, Pulek et al. '200 describes a filter consisting of at least one sheet of a diffusion medium, consisting of multiple layers of oriented strands (col. 4, lines 54-65), wrapped or coiled together in alternating layers (col. 3, lines 48-55) with at least one sheet of a filter medium, consisting of non-woven thermoplastic microfibers that may be, e.g., melt blown, spunbond, carded or hydroentangled (col. 5, lines 20-22). Pulek et al. '200 thus provides no teaching or suggestion of Applicants' invention of a tubular filter product comprising an integral tubular

[1] As acknowledged by the Examiner, in response to an earlier action, Applicants elected Group II (claims 7-10) for further prosecution in this application. The Examiner also refers to claim 7 in the Office Action Summary. Therefore, for the purposes of this response, we have assumed that reference by the Examiner in the text of the office action to claim 1 is in error and that reference was instead intended to claim 7. We have responded accordingly.

body of melt blown fibers formed by deposit of a plurality of the melt blown fibers upon a rotating support.

Furthermore, with respect to claim 10, according to Applicants' invention, the pattern of cavities comprises recesses defined by the melt blown fibers of the integral tubular body, with localized regions of the melt blown fibers defining the recesses having melt blown fiber density per unit volume relatively greater than an average melt blown fiber density per unit volume associated with the tubular filter product. These localized regions of relatively greater melt blown fiber density per unit volume are created by local compression of the melt blown fibers against one another when the recesses are formed during and/or promptly following deposit of the melt blown fibers from the die. Compression of the melt blown fibers serves to interlock the melt blown fibers in the regions about the cavities, thereby to increase overall collapse strength of the filter product (page 8, lines 24-27).

In contrast, in Pulek et al. '200, bypass bores are created by piercing the outermost layer of the filter with one or more "elongated, narrow, sharp instruments, such as steel pins" (col. 10, lines 22-25). There is no intimation in Pulek et al. '200 that, upon removal of the pins, the piercing of the coiled filter sheets in this manner results in localized compressed regions of relatively higher fiber density per unit volume, as taught and claimed by Applicants. In fact, given that the piercing process is performed after the sheets of diffusion medium and filter medium are formed and then coiled together (i.e., in contrast to compression of Applicants' invention performed as a component of the melt blown fiber deposition process), it may be more readily assumed that the pins are inserted and removed without significant permanent compression of the fibers, but rather with only temporary displacement of the fibers about the pin while it is inserted.

Finally, there is no suggestion in Pulek et al. '200 for a tubular filter with a pattern of cavities comprising recesses defined by the melt blow fibers and between melt blown fibers defining the inner and outer surfaces of the integral tubular body (claim 8) nor for a tubular filter with a pattern of cavities comprising exposed recesses extending into the inner surface of the integral tubular body (claim 9).

On this basis, we submit that claim 7, as amended, is distinguished over Pulek et al. '200 and now in condition for allowance, and that claims 8-10, all dependent from claim 7, are also in condition for allowance, including on that basis.

Claims 7, 9 and 10 also stand rejected under 35 USC 103(a) as being obvious and therefore unpatentable over Storey et al. U.S. 4,784,892 in view of Pall et al. U.S. 3,867,204. We respectfully traverse.

In particular, Storey et al. '204 describes a sheet-form product, consisting of a layer of wood pulp and melt blown microfibers between two layers of melt blown microfibers, which, in the opening paragraph (col. 1, line 7), is characterized as useful for filtration, without further description or discussion of use as a filter, including at col. 4, lines 3-27, where use of the material "for a variety of purposes" is described. Pall et al. '204 describes a cylindrical filter product in which the filtration medium is an accordion-fold, corrugated sheet extending about the outer circumferential surface. The Examiner proposes to combine the prior art references by employing the sheet-form product of Storey et al. '892 as the corrugated filtration medium in a cylindrical filter of Pall et al. '294. Even assuming that such a combination is properly suggested by the references (which Applicants do not concede), the resulting product would not achieve Applicants' invention, as now more clearly claimed. In particular, there is no suggestion in Storey et al. '892 or in Pall et al. '294, whether those references are taken alone, or in any proper combination, for a tubular filter product comprising an integral tubular body of melt blown fibers formed by deposit of a plurality of the melt blown fibers upon a rotating support, the integral tubular body defining an outer surface and an inner surface, and further defining a pattern of cavities.

There is also no suggestion in Storey et al. '892 or in Pall et al. '294 for a tubular filter with a pattern of cavities comprising recesses defined by the melt blow fibers and between melt blown fibers defining the inner and outer surfaces of the integral tubular body (claim 8).

On this basis, we submit that claim 7, as amended, is distinguished over the prior art and now in condition for allowance over Storey et al. '892 and Pall et al. 294, whether those references are taken alone, or in any proper combination, and that claims 8-10, all dependent from claim 7, are also in condition for allowance, including on that basis.